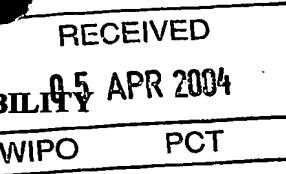


## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TP 1427-WO	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. PCT/SE 2003/000040	International filing date (day/month/year) 14.01.2003	Priority date (day/month/year) 21.01.2002
International Patent Classification (IPC) or national classification and IPC B29C 45/04		
<b>Applicant</b> Tetra Laval Holdings & Finance SA et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <u>7</u> sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand 16.05.2003	Date of completion of this report 30.03.2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Fredrik Andersson/ELY Telephone No. +46 8 782 25 00

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/SE 2003/000040

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on a translation from the original language into the following language English, which is the language of a translation furnished for the purposes of:

- international search (under Rules 12.3 and 23.1(b))  
 publication of the international application (under Rule 12.4)  
 international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished

the description:

pages 1, 5-10 as originally filed/furnished  
 pages\* 2-4 received by this Authority on 18.12.2003  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:

pages \_\_\_\_\_ as originally filed/furnished  
 pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
 pages\* 11-14 received by this Authority on 18.12.2003  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:

pages \_\_\_\_\_ as originally filed/furnished  
 pages\* 1-4 received by this Authority on 13.02.2003  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

- the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/SE 2003/000040

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	<u>1-31</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-31</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-31</u>	YES
	Claims	_____	NO

**2. Citations and explanations (Rule 70.7)**

Documents cited in the International Search Report:

- D1. DE 4310980 A1
- D2. DE 4307795 A1
- D3. DE 4337490 A1
- D4. EP 1072379 A1
- D5. WO 0062998 A1
- D6. US 5096402 A

Amended claims have been filed on 18 December 2003 where new independent claim 1 comprises the features of originally filed claims 1 and 5. New independent claim 12 comprises the features of originally filed claims 13, 18 and 19.

**Claims 1 and 12**

D1 is considered to represent the closest prior art. From D1, an apparatus and a method are known for the manufacturing of plastic parts. The apparatus comprises an extruder (27) with spray nozzles (25), which in a first position (I) comprises co-operating mould parts (2 and 3) which have an open and a closed position (compare e.g. positions VI and VII in figure 2). The apparatus further comprises means (4) for displacement of each plastic part in relation to an injection moulding position (I) where injection moulding takes place. After the injection moulding has taken place, the moulding tool (1) is successively displaced, in its closed position, together with the plastic part to a cooling area (positions II-VI). In the cooling area, every plastic part is allowed to cool respectively in the stations.

.../...

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/SE 2003/000040

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

New page 2 of the description has been filed on 18.12.2003, where reference is made to the "subclaims 13 to 33" (line 12). There are only 31 claims in the application.

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

After the cooling steps, the moulding tool is opened successively by a transfer curve (13) arranged in the displacement means (4), and the plastic part can thereafter be taken out (position VII). (See also column 4, line 14 - column 5, line 40.)

The difference between the invention according to new claims 1 and 12, and D1 is the unity device (15), which holds the mould parts together by using a first force and then a second force, where the second force is greater than the first force.

The stated difference implies that the injection moulding can be carried out with good precision and that certain adjustments in the united moulding tool may be put into effect before the greater force is applied.

The cited prior art does not give any indication that would lead a person skilled in the art to the above mentioned differences. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in new independent claims 1 and 12, and in the dependent claims, is novel and is considered to involve an inventive step. The invention is industrially applicable.

Also, documents D2-D6 now only represent the general state of the art.